

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION

ORDER NO. 99-030

REISSUANCE OF WASTE DISCHARGE REQUIREMENTS FOR:

U.S. ARMY CORPS OF ENGINEERS, SAN FRANCISCO DISTRICT
THREE YEAR DREDGING CYCLE, 1999 THROUGH 2001
MAINTENANCE DREDGING

The California Regional Water Quality Control Board, San Francisco Bay Region (herein called "the Regional Board"), finds that:

1. These Waste Discharge Requirements (Requirements) apply to the U.S. Army Corps of Engineers, San Francisco District (hereinafter "the Corps") for maintenance dredging of federal navigation channels in the San Francisco Bay, and for disposal of dredged material created by these activities, over a period of three years.
2. The Corps maintains the navigability of federally authorized channels in the Bay. The Corps removes accumulated sediment (primarily silt and clay) by hydraulic (e.g. self-propelled hopper; hydraulic cutter head) or mechanical (e.g. clamshell) dredge, and typically disposes of the material by either self-propelled hopper or dump scow.
3. This Order applies only to maintenance dredging, which is dredging that is performed on a periodic basis to previously authorized depths and removes recently deposited materials. This Order does not apply to "new work" dredging that removes material to new authorized depths and may involve consolidated materials or historically contaminated materials.
4. Dredged material from San Francisco Bay is typically disposed or reused at aquatic sites in the Bay, in the ocean or at upland sites. Disposal in the Bay occurs at one of four designated aquatic disposal sites in the Bay (SF-11, located near Alcatraz Island; SF-10, in San Pablo Bay; SF-16 in Suisun Bay; or SF-9, in the Carquinez Straits). Dredged material from the San Francisco Main Ship Channel is disposed at the San Francisco Bar disposal site (SF-8). A portion of maintenance dredged material is taken from the Bay to the San Francisco Deep Ocean Disposal Site (SFDODS), about 50 miles offshore. Another portion of maintenance material is reused or disposed at upland sites.
5. The Board and the Corps are participants in the Long Term Management Strategy (LTMS) for Placement of Dredged Material in the San Francisco Bay Region (along with the U. S. EPA, the San Francisco Bay Conservation and Development Commission and the State Water Resources Control Board, collectively known as the LTMS agencies). The LTMS agencies evaluated

alternative management options for disposal and reuse of dredged sediment over a fifty year planning horizon in a Policy Environmental Impact Statement/Environmental Impact Report (EIS/EIR) that was completed in October 1998. The EIS/EIR indicated that dredged material disposal may have adverse impacts on the beneficial uses of the waters of San Francisco Bay and that the in-bay disposal should be reduced from historical levels.

6. The LTMS agencies have determined that the preferred alternative is to reduce disposal in the Bay to low levels (5 to 20 percent of historic volumes). This goal could be accomplished by disposing of more dredged material at SFDODS and reusing additional dredged material for various upland projects. The Board finds that it is in the public interest to encourage ocean disposal and upland reuse of suitable dredged materials to reduce the volume of disposal in San Francisco Bay.
7. The LTMS agencies are currently planning to phase in the implementation of the LTMS over a period of about 12 years, with minor reviews of the process every three years and major reviews every 6 years. The details of the implementation and that transition period will be included in the LTMS Management Plan, which is scheduled to be completed by the end of 1999. The actual mechanism of the reduction of in-bay disposal (whether voluntary or mandated) has not yet been decided upon.

The Corps has been finding ways to reduce in-bay disposal, even prior to the LTMS agencies' selection of the preferred alternative. In 1994, the Corps placed about 120,000 cubic yards (cy) of material dredged from the Suisun Bay Channel and New York Slough at the Jersey Island levee reinforcement demonstration project. Also in 1994, the Corps placed material from the Petaluma River-Across the Flats at the Sonoma Baylands Restoration project. In 1997, maintenance material from the Port of Richmond was taken to SFDODS. In 1998, the Corps placed approximately 200,000 cy of material dredged from Suisun Bay Channel onto Winter Island as a levee improvement project.

8. The Corps has conducted studies that show that dredged material from the Pinole Shoal, Suisun Bay Channel and New York Slough is primarily sand that has readily identifiable beneficial uses and which typically has low pollutant burdens. The Board will continue to encourage the Corps to find beneficial uses for clean, sandy dredged material from these locations.
9. The Corps is currently planning to take sandy material from the 1999 Suisun Bay Channel and New York Slough dredging projects to Winter Island to continue the levee restoration work that was initiated in 1998. The Corp will seek funds to take dredged material from the Suisun Bay Channel to Sherman Island in the federal fiscal year 2000 and to either Sherman Island or Winter Island in the federal fiscal year 2001.
10. The Corps has been supportive of habitat restoration using dredged material, initiating feasibility studies at Hamilton Army Airfield and providing dredge

material at Sonoma Baylands. The Board expects that the Corps will continue to seek funding for habitat restoration using dredged material.

11. The Corps' proposed maintenance dredging for the federal fiscal years 1999, 2000 and 2001 includes ocean disposal and upland reuse projects as shown in Tables 1a, 1b and 1c, below. The Corps is proposing to take 54% of the maintenance dredging material to the ocean, 15% to upland sites and 31% to in-bay disposal sites over those three years.

Table 1a. Fiscal Year 1999 Federal Maintenance Dredging Projects

Projects	Estimated Volume(cy)	Proposed Disposal Site
S.F. Main Ship Channel	600,000	Ocean (SF-8)
Napa River (lower portion)	150,000	Upland-Local sponsor site
Oakland Harbor	500,000	Ocean (SFDODS)
Pinole Shoals Channel	400,000	San Pablo (SF-10)
Richmond Outer Harbor	400,000	Alcatraz (SF-11)
Suisun Bay Channel (New York Slough)	150,000	Upland - Winter Island
Total - 2,200,000		Total In Bay - 800,000

Table 1b. Fiscal Year 2000 Federal Maintenance Dredging Projects

Projects	Estimated Volume(cy)	Proposed Disposal Site
S.F. Main Ship Channel	600,000	Ocean (SF-8)
Oakland Harbor	400,000	Ocean (SFDODS)
Richmond Inner Harbor	200,000	Ocean (SFDODS)
Richmond Outer Harbor	400,000	Alcatraz (SF-11)
Suisun Bay Channel	150,000	Upland - Sherman Island
Total - 1,750,000		Total In Bay - 400,000

Table 1c. Fiscal Year 2001 Federal Maintenance Dredging Projects

Projects	Estimated Volume(cy)	Proposed Disposal Site
S.F. Main Ship Channel	600,000	Ocean (SF-8)
Oakland Harbor	900,000	Ocean (SFDODS)
Richmond Outer Harbor	350,000	Alcatraz (SF-11)
Richmond Inner Harbor	200,000	Ocean (SFDODS)
Suisun Bay Channel	150,000	Upland-Sherman or Winter Island
Suisun Channel (Slough)	150,000	Upland-Local sponsor site
San Leandro Channel	100,000	Upland-Local sponsor site
Napa River	400,000	Upland-Local sponsor site
Petaluma River Channel	250,000	Upland-Local sponsor site
Petaluma Across Flats	300,000	San Pablo (SF-10)
Redwood City Harbor	1,000,000	Ocean (SFDODS)
San Rafael Creek Channel	60,000	Alcatraz (SF-11)
San Rafael Across the Flats	175,000	Alcatraz (SF-11)
S.F. Harbor	200,000	Ocean (SFDODS)
Mare Island Strait	500,000	Carquinez Strait (SF-9)
Pinole Shoals	400,000	San Pablo (SF-10)
Total - 5,485,000		Total In Bay - 1,785,000

12. The Alcatraz Island disposal site, like the other three in-bay disposal sites, is operated as a "dispersive" site, that is, material disposed of at the site should be dispersed by currents and tidal flows, and the site should not accumulate material. In the late 1980s, the Corps conducted surveys of the Alcatraz disposal site, which showed a drastic decline in depth and unexpected bottom topography ("mounding"). Recent monitoring of the site performed by the Corps (Draft Alcatraz Trend Study, June 1998) has shown that while the height of the disposal site appears to be stable, the mound is spreading laterally, and the total volume of material in the mound seems to be increasing.
13. In response to mounding problems, the Board and Corps proposed to significantly reduce the allowable monthly disposal rates and volumes at the Alcatraz site (Corps Public Notice No. 93-3). The Board incorporated a target on the amount of dredged material that can go to the in-bay disposal sites in the 1995 San Francisco Bay Region Water Quality Control Plan (Table 2, below). In addition, the Corps has implemented restrictions on the allowable disposal locations within the designated disposal site to minimize the elevation of the mound.

Table 2. Monthly and Annual Target Volumes in cubic yards (cy)

Designated Disposal Site	Monthly Target Volume (cy)	Annual Target Volume (cy)
Alcatraz Island (SF-11)		
October - April	1,000,000	4,000,000
May - September	300,000	
Carquinez Strait (SF-9)		
Wet/Above Normal Year*	1,000,000	3,000,000
Normal or Other Year	1,000,000	2,000,000
San Pablo Bay (SF-10)	500,000	500,000

* Water year classifications are designated by California Department of Water Resources.

14. Target volumes for the dredged material disposal sites found in the 1995 Basin Plan continue to be in effect. Reductions in the annual and monthly targets, based on the LTMS Management Plan will be proposed for inclusion in the next edition of the Basin Plan. In the mean time the Regional Board will rely on voluntary efforts and implementation of the LTMS Management Plan to reduce in-bay disposal.
15. The Corps maintains administrative controls on allowable disposal volumes at the in-bay disposal sites so that the target volumes are not exceeded. Quarterly are provided to Regional Board staff in order to monitor compliance with the target volumes and to facilitate planning of dredging and disposal operations oversight. This Order will continue to require these administrative controls and periodic reports.

16. Although several studies have been conducted on the impacts of dredged material disposal at Alcatraz, the continued lateral growth of the mound indicates that the management of the site needs to be improved. The Board finds that additional information is needed to assess the cumulative and long-term effects of dredging and dredged material disposal. Particular areas of focus should be: 1) fate of dredged material disposed at the currently authorized disposal sites, 2) evaluation of an appropriate initial mixing zone for dredged material disposal, 3) status of residual dredged material at the disposal sites (physical properties, size and extent of the Alcatraz mound, etc.), and 4) how the dredging and disposal process affects the bioavailability of chemicals that currently impair the beneficial uses of San Francisco Bay. The Board recognizes the need for more information about these concerns and therefore endorses a study-based approach to monitor the effects of dredging and dredged material disposal. This Order will require ongoing investigation of the impacts of dredged material disposal.
17. The Board implemented the Regional Monitoring Program (RMP) in April of 1992. The RMP is a coordinated and comprehensive long-term monitoring program with the goal of monitoring water and sediment quality to determine compliance with relevant numerical objectives and studying bioaccumulation at an array of Bay locations. Additionally, the RMP provides for special and pilot studies of interest to program participants. The Corps is a participant in the RMP, and contributes to the program by funding monitoring of suspended sediments at an array of locations in the Bay, which is carried out by the United States Geological Survey. This monitoring has and will continue to improve understanding of sediment transport processes and create a comprehensive database for various numerical modeling efforts.
18. The Corps participates in and handles the logistics for the operation of the Dredged Material Management Office (DMMO); an interagency working group that reviews dredging projects. Other agencies, in addition to the Corps and the Regional Board that participate in the DMMO on a regular basis are the U.S. Environmental Protection Agency, the Bay Conservation and Development Commission, California State Lands Commission and California Department of Fish and Game. Each agency retains its decision-making authority, but the group has significantly reduced project review time by concurrent consideration of projects. Corps dredging and disposal projects are subject to DMMO review on the same basis as non-Corps projects.
19. Individual dredging episodes covered by these Requirements will be reviewed by the DMMO to determine the scope of required testing and suitability for disposal or reuse of the dredged material.
20. The Corps is implementing the testing guidelines found in the recently published guidance document *Evaluation of Dredged Material Proposed For Discharge in Waters of the U.S. - Testing Manual, February 1998 (Inland Testing Manual or ITM)*. This guidance does not recommend the continued use of the Alcatraz Environs reference site. Board staff will work closely with the Corps to determine if the local application of the ITM will include use of

the Alcatraz Environs reference site or if an alternative reference site is more appropriate for maintenance dredging projects in San Francisco Bay.

21. The Corps is required to ensure that all navigation channels are dredged to a safe depth. If, through routine surveying, an area is found to have become a hazard to navigation, the Corps may carry out dredging on a limited basis even though that project is not scheduled for dredging. In such cases, an expedited testing and approval process is often necessary.
22. The proposed maintenance dredging is exempt from CEQA pursuant to Section 15304(g) of the Resources Code.
23. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20 and November 13, 1995, respectively. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations, section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.
24. The beneficial uses of San Francisco Bay in the vicinity of the dredging and disposal areas are:
 - a. Fish migration and spawning
 - b. Estuarine habitat
 - c. Wildlife habitat
 - d. Preservation of rare and endangered species
 - e. Water contact and non-contact water recreation
 - f. Shellfish harvesting
 - g. Commercial and sport fishing
 - h. Navigation
 - i. Industrial process and service supply
25. The Corps and interested persons have been notified of the Board's intent to issue requirements for the Corps and have been provided with the opportunity to submit their written comments.

The Board, in a properly noticed public hearing on May 25, 1999, heard and considered all comments pertaining to the project.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder and to the provisions of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the Corps shall comply with the following:

A. RECEIVING WATER LIMITATIONS

1. The dredging and disposal activities shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The discharge of waste shall not cause the following conditions to exist in waters of the State that cause a nuisance or adversely affect beneficial uses at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Aquatic growths;
 - c. Significant alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
3. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved Oxygen 5.0 mg/l minimum.
Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved sulfide 0.1 mg/l maximum
 - c. pH Variation from natural ambient pH by more than 0.5 pH units.
 - d. Un-ionized ammonia 0.025 mg/l as N Annual Median
0.16 mg/l as N Maximum
 - e. Turbidity The turbidity of the waters of the state at

any point beyond 200 feet outside of the disposal area shall not increase above background levels by more than the following:

<u>Receiving Water Background</u>	<u>Incremental Increase</u>
< 50 units	5 units, maximum
50 - 100 units	10 units, maximum
> 100 units	10% of background, max

4. The discharge shall not cause a violation of any applicable water quality objectives for receiving waters adopted by the Board and the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

B. *PROVISIONS*

1. Quarterly Reports: The Corps shall keep a record of all disposal events that take place at the in Bay disposal sites and upland disposal sites in the San Francisco Bay Area. A quarterly summary report (Quarterly Report) of all dredging and disposal activities in San Francisco Bay shall be made available to the Board staff and interested members of the public through the interagency).

The quarterly report shall contain the following information for each project: name of project, dates dredged, volume of material proposed for removal ("in-situ" volume), dredged volume disposed ("bin" volume), disposal site(s) used, and name of any affiliated dredging permit holders (permittees). In addition to the printed version of the Quarterly Report, the Corps shall provide a digital version of the relevant data to the Regional Board staff to facilitate ongoing evaluation of the impacts of dredging and dredged material disposal.

2. Disposal Site Monitoring: The Corps conducts quarterly bathymetric surveys of the permitted in-bay disposal sites. The Corps shall keep a record of these surveys on file and shall make them available for inspection by the Board, other regulatory agencies and interested members of the public upon written request to the Corps staff.

The Corps staff shall continue to conduct quarterly bathymetric surveys at the permitted disposal sites and meet with Regional Board staff to improve methods to transmitting the bathymetric data in a timely manner

3. Draft Alcatraz Trend Study: Comments on this report have been provided to the Corps. This report shall be finalized within 60 days of the approval of this order.

4. Impacts of Dredge Material Placement at In-Bay Disposal Sites: Studies to date of suspended solids in the vicinity of the in-Bay disposal sites have been preliminary in nature and are inconclusive about the impacts of the disposal activities and the fate of dredged materials. The Draft Alcatraz Trend Study indicates that the mound at Alcatraz may be expanding laterally, thus impacting an increasing area of benthic habitat of the Bay. New techniques for evaluating the fate and transport of suspended solids and surficial sediments (by the USGS and others) may provide more certainty about the impacts of disposal at Alcatraz and the most prudent management of the site.

The Corps staff shall work with the Regional Board staff and other interested parties to review previous studies of the in-Bays disposal sites and identify data gaps, resulting in a proposal for improved monitoring of the sites. This working group shall identify and prioritize data needs relative to the operation of the in-Bay disposal sites and make recommendations for the addressing these needs, through work by the Corps or work by other interested parties. The Corps shall provide a workplan and a schedule, acceptable to the Executive Officer, for addressing any remaining data gaps and making recommendations for improved site operations, within 6 months of the approval of this Order.

5. Dredged Material Management Office (DMMO) Review: Each episode permitted in these Requirements will be presented individually to the Board staff or the DMMO for review. The Corps shall request in writing authorization by Board staff or the DMMO for each dredging episode and include the following information:
- a. A sampling and analysis plan (SAP) submitted at least 60 working days in advance of the start of dredging. The SAP shall follow guidelines developed by the DMMO.
 - b. Estimates of the volume of dredged material to be removed from each project (in cubic yards) based upon current condition bathymetric surveys and dredging history. These bathymetric surveys shall be kept on file and be available for inspection by the Board, other regulatory agencies and interested members of the public upon written request to the Corps staff.
 - c. Copies of all laboratory results and findings for dredging projects, including all results of sediment testing and analysis shall be submitted for review by the DMMO at least 30 days in advance of dredging, unless the DMMO members agree to a shorter review time. The submittal shall include both a summary of chemical and toxicological testing in tabular form, as well as copies of laboratory analysis and quality control and assurance (QA/QC) sheets.
6. Disposal Site Volume Targets: The Corps shall comply with the volume targets specified by the Board in this Order, and contained in the Board's

June 21, 1995 Basin Plan, until the Basin Plan or this Order are revised. Revisions of the volume targets in the Basin Plan shall take precedent over the targets in this Order.

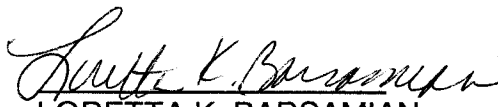
7. Sediment Testing: The Corps shall conduct physical, chemical, and biological sediment characterization of the sediment to be disposed in San Francisco Bay consistent with Evaluation of Dredged Material Proposed For Discharge in Waters of the U.S. -Testing Manual, April 1998 (Inland Testing Manual or ITM) or other methods and protocols approved by the Board's Executive Officer. The testing program for each project will be clearly described in the Sampling and Analysis (SAP) for each dredging project.
8. Mixing Zone Modeling: The Corps shall evaluate the use of the dispersion models listed in the ITM and make a detailed recommendation to the Board staff and the DMMO on the best model to use for estimating dredged material dispersion at the designated disposal sites within 90 days of the adoption of this order. Board staff will use this information to develop a recommendation to the Board on the most appropriate Initial Mixing Zone for evaluation of water column toxicity data. The Initial Mixing Zone and toxicity data will be used to determine the suitability of dredged material disposal in the Bay. Depending on the recommendations, dispersion model analysis may be required on a regular basis for in-bay disposal.
9. Regional Monitoring: The Corps shall participate in regional monitoring of pollutant effects in San Francisco Bay. In previous years, the Corps has participated in the Regional Monitoring Program for Trace Substances (RMP). Past contribution to the RMP by the Corps has been through support of the United States Geological Survey (USGS) for study of suspended sediment processes in the San Francisco Estuary. Implementation or funding of the USGS study on suspended sediments, or other RMP study program will constitute participation in the San Francisco Regional Monitoring Program.
10. Cessation of Discharge The discharge of dredged materials to the waters of the State shall cease immediately whenever violations of these Requirements are detected by the Corps or by Board staff as determined by the Executive Officer, and the discharge shall not resume until compliance can be assured to the Executive Officer's satisfaction.
11. Herring Fishery The Corps shall not carry out dredging activities in designated areas during the typical spawning period, from December 1 through March 1, unless written approval is obtained from the Department of Fish and Game.

12. Proposed Disposal/Reuse sites The Corps shall evaluate the feasibility of using disposal/reuse sites that are not in San Francisco Bay on a project by project basis. Elements of the feasibility studies should include:
 - a. Habitat Restoration The Corps shall evaluate the feasibility of placing the dredged material in question at habitat restoration sites within the San Francisco Bay/Delta region and take dredged material to those sites where it is feasible. The Corps shall make good faith efforts to coordinate with habitat restoration projects that are seeking dredged material.
 - b. Levee Restoration The Corps shall evaluate the feasibility of placing the dredged material in question at levee restoration sites within the San Francisco Bay region and take dredged material to those sites where it is feasible. The Corps shall make good faith efforts to coordinate with levee restoration projects that are seeking dredged material.
 - c. Rehandling Sites The Corps shall evaluate the feasibility of placing the dredged material in question at dredged material rehandling sites within the San Francisco Bay/Delta region and take dredged material to those sites where it is feasible.
 - d. Ocean Disposal The Corps shall evaluate the feasibility of placing the dredged material in question at SFDODS.
13. Changes of the Proposed Disposal/Reuse sites In the event that the Corps' proposed disposal/reuse sites vary from the indications in Tables 1a, 1b, and 1c of the Findings, the District Engineer shall inform Executive Officer in writing. The District Engineer may substitute the disposal/reuse site with another site, acceptable to the Executive Officer, which has equivalent protection of the beneficial uses of water.
14. Beneficial Re-use Coordination The Corps shall make good faith efforts to coordinate with and, if appropriate, to enter into agreement(s) with the state Department of Water Resources, the State Coastal Conservancy, and other local sponsors, as necessary, in order to facilitate the placement of dredged material at non-aquatic and "beneficial re-use" sites.
15. Sherman Island Reuse The Corps shall provide the Regional Board with bimonthly progress reports on the reuse of dredged material for levee improvements at Sherman Island, beginning on June 1, 1999. The meetings shall continue until an inter-agency agreement is executed or until such time that the participating agencies determine a Sherman Island project is not feasible.
16. Ocean Disposal The Corps shall evaluate the feasibility of disposal of dredged material from maintenance dredging projects at the designated deep ocean disposal site (SFDODS) for projects occurring within the same time-frame and location as a scheduled Navigation Improvement (deepening) project. A written appraisal of feasibility shall be submitted when dredging occurs during the same time, by the same contractor, or under the same

contract covering the material to be disposed of at the deep ocean disposal site.

17. The Corps shall permit the Board or its authorized representative in accordance with California Water Code Section 13267(c) as follows:
 - a. Entry upon premises in which any required records are kept.
 - b. Access to copy any records required to be kept under terms and conditions of this order.
 - c. Inspection of monitoring equipment or records.
 - d. Sampling of any discharge.
 - e. Provide small craft transport to off-shore locations or vessels for the purpose of inspection, provided that it is within normal business hours.
18. The Corps shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.
19. This Order supersedes Order No. 97-041.
20. Pursuant to section to Title 23, California Code of Regulations Section 3857, these Requirements are issued in place of water quality certification.
21. This Order will expire on December 31, 2001, and upon submittal of all required reports to the satisfaction of the Executive Officer.

I, Loretta K. Barsamian, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 25, 1999.


LORETTA K. BARSAMIAN
EXECUTIVE OFFICER